

Demystifying computer code for northern New Mexico students

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Laboratory employees recently helped elementary, middle, and high school students in northern New Mexico try their hands at computer programming during the Computer Science Education Week's Hour of Code event, a one-hour introduction to computer science.

Students used the "Blockly" programming language to instruct characters from the Disney movie *Frozen* to create patterns on ice, in the process learning such basic programming concepts as sequence, conditionals ("if" statements), iteration (loops) and functions as well as the geometry of squares, circles and parallelograms.

Students who finished their 20-puzzle tutorial ahead of the rest of the group had a chance to try additional exercises, such as programming Angry Birds. Some of the provided tutorials were geared toward pre#readers and early readers so that kindergartners and first-graders could participate as well.

“The nonprofit organization Code.org partnered with Disney to provide the *Frozen* tutorials in an effort to get more girls and underrepresented students interested in computer science,” explained David Kratzer, one of the Laboratory’s participating High Performance Computing scientists. “Code.org believes that computer science and computer programming should be part of core curricula in schools along with other science, technology, engineering and math subjects.”

During the sessions that Kratzer participated in, the Hour of Code instructors began by showing a brief overview video before asking students to complete the *Frozen* exercises. At the end, the instructors wrapped up their visit by having the students watch a videotaped message by President Obama.

Each student received a Student Coder Certificate that included a note to parents and links to additional computer science activities. “Computer science provides a foundation for virtually any career,” the certificate noted. “This fundamental knowledge is needed to prepare students for the 21st century, regardless of their ultimate field of study or occupation.”

To watch some of the Code.org videos, including President Obama’s comments, go to Code.org’s [Inspire students to try computer science](#) video page.

Lab volunteers support science education and other community events

Laboratory participation in events like the Hour of Code would not be possible without support from the Department of Energy through the Laboratory’s Science Education Community Service Time Program. To request science, technology, engineering or math (STEM) experts for other science education events or needs, members of the community are invited to complete a brief online [request form](#). The form also can be accessed from the [STEM Education Programs](#) website.

An additional option for requesting Los Alamos experts and other volunteers is through the Laboratory’s [Vecinos Volunteer Program](#), which partners with the national [VolunteerMatch](#) initiative.

Los Alamos National Laboratory

www.lanl.gov

(505) 667-7000

Los Alamos, NM

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